

CLAIMS

What is claimed is:

1. A reciprocating-piston machine, in particular a refrigerant compressor (1) for a motor vehicle air-conditioning system, comprising:
  - a rotatable machine shaft (2),
  - a plurality of pistons (4) movably supported by piston guides (10) and having piston axes which extend parallel to, and are arranged all at the same distance from, the machine shaft (2) and in circumferentially spaced relationship, on a cylinder envelope around the machine shaft,
  - an annular pivoting disc (5) extending around the machine shaft (2) and being connected to said machine shaft (2) so as to be driven thereby,
  - each of said pistons (4) being engaged with said pivoting disc (2) by a joint arrangement (6),
  - said joint arrangement (6) including an at least partially spherical receptacle with
  - at least one bearing element (18, 19) arranged in said receptacle moveably relative to an associated piston and relative to said pivoting disc,
  - a first sliding element (18, 20) having a first sliding face (18a, 20a) in the form of a spherical segment, with a first geometric center ( $M_1$ ,  $M_3$ ), and
  - a second sliding element (19, 21) having a second sliding face (19a, 21a) in the form of a spherical segment, with a second geometric center ( $M_2$ ,  $M_4$ ), said first and said second geometric centers being arranged at a distance from one another.

2. A reciprocating-piston machine according to Claim 1, wherein said joint arrangement (6) has a center of force transmission (K) which is located approximately on said cylinder envelope defined by said piston axes and is positioned in front of the associated piston axis (12) with respect to the direction of rotation of the pivoting disc (5).
3. A reciprocating-piston machine according to claim 1, wherein the first geometric center is arranged on a side of the center plane (5a) of said pivoting disc (5), which faces the piston guide and the second geometric center is arranged on a side of the center-plane of said pivoting disc, which faces away from the piston guide.
4. A reciprocating-piston machine according to claim 1, wherein the first geometric center ( $M_1$ ) is arranged on that side of the center plane (5a) of the of the pivoting disc (3), which faces the piston guide and the second geometric center ( $M_2$ ) is arranged approximately on the center plane (5a) of the pivoting disc or on that side of the center plane (5a) of the pivoting disc, which faces the piston guide.
5. A reciprocating-piston machine according claim 1, wherein the first geometric center ( $M_3$ ) is arranged on said cylinder envelope so as to be offset in the direction of rotation (w) relative to the second geometric center ( $M_4$ ).